

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Camille Thompson Examiner #: 79244 Date: 8/24/04  
 Art Unit: 1774 Phone Number 30 511 272-1530 Serial Number: 09/830,897  
 Mail Box and Bldg/Room Location: 10D28 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Electroluminescence Materials  
 Inventors (please provide full names): Poopathy Kathirgomanathan

Earliest Priority Filing Date: 11/02/1998

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please do a search on claim 6  
 $\text{Eu(II) (TMHD)}_2$   
 $\text{Eu(II) (tris(2,2,6,6-tetramethyl-3,5-heptanedionate))}_2$

Thanks,  
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## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>EL</u>	NA Sequence (#) _____	STN <u>\$ 384.14</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>(1)</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic <u>(and)</u>	Dr.Link _____
Date Completed: <u>8-27-04</u>	Litigation <u>(and)</u>	Lexis/Nexis _____
Searcher Prep & Review Time: <u>5</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>60</u>	Other _____	Other (specify) _____

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Cancelled) ✓

2. (Cancelled) ✓

3. (Cancelled) ✓

4. (Cancelled) ✓

5. (Cancelled) ✓

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6. (Currently Amended) An electroluminescent compound having the formula ~~according to claim 1~~  $\text{Eu(II)(TMHD)}_2$ .

7. (Currently Amended) A composition which comprises an inert polymer and from 5% to 95% by weight of an electroluminescent compound as claimed in claim 1 7.

8. (Previously Amended) An electroluminescent device which comprises (i) a transparent substrate (ii) an electroluminescent layer an electroluminescent compound which comprises an organic complex of a metal selected from ~~transition metals, lanthanides and actinides~~ the group consisting of thorium (IV), yttrium (III), gadolinium (III), europium (II), terbium (III), cerium (III), cerium (IV) and mixtures thereof and an organic ligand which electroluminescent compound emits light in the blue or purplish blue spectrum when an electric current is passed through it and in which the organic ligand has the formula

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=> d his

FILE 'HCAPLUS'

L1 107 S KATHIRGAMANATHAN ?/AU  
L2 107 S KATHIRGAMANATHAN P?/AU  
L3 262 S TMHD  
L4 1 S L2 AND L3

FILE 'REGISTRY'

L5 1 S 15492-51-0  
L6 10135 S 3189/RID  
L7 1088 S L6 AND EU/ELS  
E TRIS(DIPIVALOYLMETHANATO)EUROPIUM/CN  
L8 1 S E3

FILE 'HCAPLUS'

L9 541 S L8  
L10 93700 S (ELECTROLUM!N? OR ORGANOLUM!N? OR (ELECTRO OR ORGANO OR  
L11 9 S L9 AND L10

FILE 'HCAPLUS'

L12 18 S L2 AND (EU OR EUROPIUM#)  
L13 2813 S ?HEPTANEDION?  
L14 2 S L12 AND (L13 OR L3)

FILE 'LREGISTRY'

L15 STR 15522-71-1

FILE 'REGISTRY'

L16 0 S L15

FILE 'LREGISTRY'

L17 STR L15

FILE 'HCAPLUS'

L18 3 S (EU OR EUROPIUM#) (2A) TMHD

FILE 'REGISTRY'

L19 10 S L17

L20 254 S L17 FUL  
 SAV L20 THO897/A  
 L21 STR L17  
 L22 2 S L21 SSS FUL SUB=L20

FILE 'HCAPLUS'

L23 3 S L22  
 L24 144 S TMHD(W)2  
 SEL L24 142 RN

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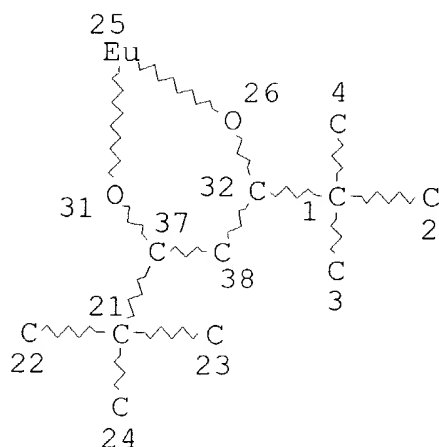
L25 11 S E1-E11  
 L26 2 S L25 AND CU/ELS  
 L27 STR L21  
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FILE 'HCAPLUS'

L30 2 S L29  
 L31 1 S L23 NOT L30  
 L32 3 S L23 OR L30

FILE 'REGISTRY'

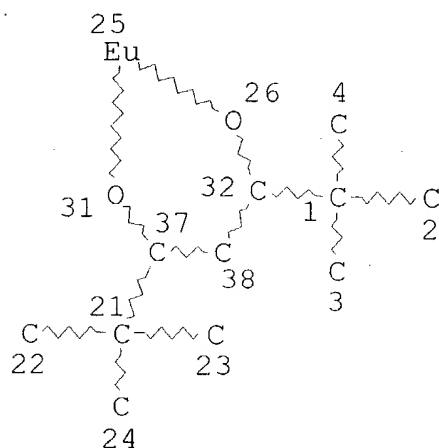
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 L17 STR



NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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L27          STR
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CONNECT IS E4 RC AT 25
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
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RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 14

L29 1 SEA FILE=REGISTRY SUB=L20 SSS FUL L27

1 ANSWERS

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=> d 132 1-3 ibib abs hitstr hitrn
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L32 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2000:314793 HCAPLUS  
 DOCUMENT NUMBER: 132:354581  
 TITLE: Electroluminescent materials  
 INVENTOR(S): Kathirgamanathan, Poopathy  
 PATENT ASSIGNEE(S): South Bank University Enterprises Ltd., UK  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000026323	A1	20000511	WO 1999-GB3619	19991102
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1131388	A1	20010912	EP 1999-954123	19991102
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI				
BR 9915252	A	20011204	BR 1999-15252	19991102
JP 2002528633	T2	20020903	JP 2000-579697	19991102
AU 754481	B2	20021114	AU 2000-10562	19991102
PRIORITY APPLN. INFO.:			GB 1998-23761	A
			WO 1999-GB3619	W

02

OTHER SOURCE(S): MARPAT 132:354581

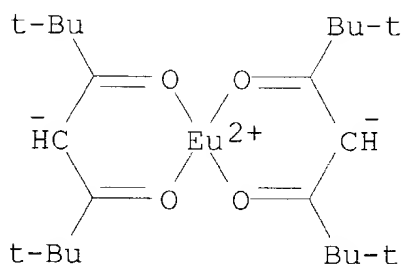
AB Photoluminescent compds. comprising an org. complex of a transition metal, a lanthanide or an actinide with an org. ligand and electroluminescent compds. comprising an org. complexes of lanthanides or actinides with org. ligands are described which emit light in the blue or purplish-blue regions of the spectrum. Electroluminescent devices employing the compds. are also described.

IT 117725-54-9P

(electroluminescent and photoluminescent materials based on metal complexes and devices using them)

RN 117725-54-9 HCAPLUS

CN Europium, bis(2,2,6,6-tetramethyl-3,5-heptanedionato- $\kappa O, \kappa O'$ )-, (T-4)- (9CI) (CA INDEX NAME)



IT 117725-54-9P

(electroluminescent and photoluminescent materials based on metal complexes and devices using them)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:714541 HCAPLUS

DOCUMENT NUMBER: 121:314541

TITLE: Synthesis and X-ray Structure of the First Divalent Lanthanide Acetylacetonate Complex, Bis(2,2,6,6-tetramethylheptane-3,5-dionato)bis(dimethoxyethane)europium(II)

AUTHOR(S): Evans, William J.; Shreeve, Julie L.; Ziller, Joseph W.

CORPORATE SOURCE: Department of Chemistry, University of California, Irvine, CA, 92717, USA

SOURCE: Inorganic Chemistry (1994), 33(26), 6435-7

CODEN: INOCAJ; ISSN: 0020-1669

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

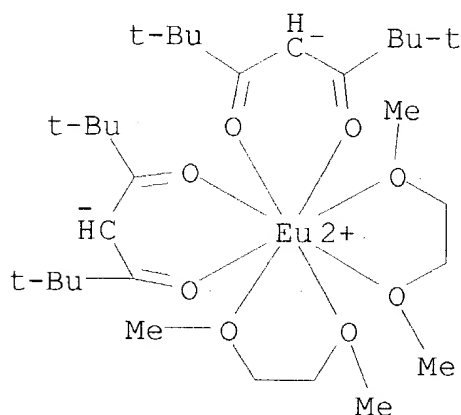
AB (THD)<sub>2</sub>Eu(DME)<sub>2</sub> (1) was isolated when dimethoxyethane (DME) is added to the product of the reaction of EuI<sub>2</sub>(THF)<sub>2</sub> with 2 equiv of K(THD) (THD = 2,2,6,6-tetramethylheptane-3,5-dionate) in THF. (THD)<sub>2</sub>Sm(DME)<sub>2</sub> (2) was prepd. analogously from SmI<sub>2</sub>(THF)<sub>2</sub>. Dark purple 2 decomp. over a two week period in soln. to form colorless (THD)<sub>3</sub>Sm(DME) (3). Both 1 and 3 contain eight coordinate metal centers. 1 Crystallizes in the monoclinic space group P2<sub>1</sub>/c with a 10.4491(11), b 23.096(3), c 14.499(2) Å, β 95.188(9)° and dc = 1.332 Mg/m<sup>-3</sup> for Z = 4. Least squares refinement of the model based on 3953 reflections ( $|F_0| > 3.0\sigma(|F_0|)$ ) converged to a final R = 3.7%. 3 Crystallizes in the triclinic space group P.hivin.1 with a 10.693(2) Å, b 13.459(3) Å, c 16.004(3) Å, α 71.332(14), β 75.691(14), γ 77.211(15)° and dc = 1.256 Mg/m<sup>-3</sup> for Z = 2. Least squares refinement of the model based on 5249 reflections ( $|F_0| > 4.0\sigma(|F_0|)$ ) converged to a final R = 3.3%.

IT 159121-81-0P

(prepn. and crystal structure of)

RN 159121-81-0 HCAPLUS

CN Europium, bis(1,2-dimethoxyethane-O,O')bis(2,2,6,6-tetramethyl-3,5-heptanedionato-O,O')- (9CI) (CA INDEX NAME)



IT 159121-81-0P

(prepn. and crystal structure of)

L32 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1988:633648 HCAPLUS

DOCUMENT NUMBER: 109:233648

TITLE: Manufacture of europium complexes

INVENTOR(S): Okada, Atsunori; Wada, Seigo; Shiokawa, Jiro;